



CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Adopt Resolution Authorizing City Manager to Execute Professional Services Agreement with Saracino Kirby Snow for Water Supply Planning Work, and Appropriate \$90,000

MEETING DATE: February 5, 2003

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That Council adopt a resolution authorizing the City Manager to execute a professional services agreement with Saracino Kirby Snow for water supply planning work and appropriate funds.

BACKGROUND INFORMATION: As the Council is aware, the City has been participating in various activities through San Joaquin County that could result in a surface water supply for Lodi. A key element of these efforts will be answers to the question "How will we use the water?" There are two fundamental concepts to consider and many, many details to be decided at some point. The two fundamental concepts are to treat the water for domestic purposes and use it as we do groundwater now, and the other is to participate in some type of groundwater conjunctive use project or develop other means of utilizing the water for non-potable water uses, such as landscape irrigation (which could include use of reclaimed water from the White Slough Water Pollution Control Facility).

Staff proposes to begin a more detailed look at these options so when it comes time to make decisions on surface water, we will have a better idea as to the full cost and practicality of using surface water in Lodi. To be clear, we have no doubts that the City will have to make some use of surface water in the future to decrease our dependence on the overdrafted groundwater basin. State land use approval requirements are placing more emphasis on linking new development approval to water supplies.


In addition to our involvement with the County and City of Stockton on the Mokelumne River Water & Power Authority, we have been in discussion with the Woodbridge Irrigation District about the possibility of obtaining a surface water supply from them.

To this end, we requested a proposal from the consulting firm of Saracino Kirby Snow (SKS) to assist the City in this work. The work will include:

- Assessing surface supply options, including direct use and groundwater recharge
- Assessing feasibility of using non-potable or reclaimed water
- Identifying new development mitigations to increased groundwater use
- Assisting City with Mokelumne River supply activities

The first three tasks will result in technical memoranda which will be presented to Council upon completion. During this process we anticipate making various public presentations, such as at service

APPROVED:


Janet Kirby -- City Manager

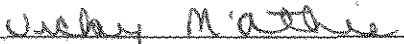
clubs and the various Chamber of Commerce committees, plus holding some public forums. Integrating a surface water supply with Lodi's groundwater system presents technical challenges which can certainly be overcome. However, the public understanding and acceptance is also very important, particularly when the cost of water service may be affected.

The fifth task (\$200,00), developing a groundwater model, may be needed, but staff recommends this task be deferred at this time. We wish to discuss this further with SKS before making a recommendation.

The more detailed scope of work is attached. The consultant cost is estimated to be \$76,000. We have added a significant contingency amount in the requested appropriation to cover public participation and meetings, plus additional work that may be needed to respond to questions/comments as the work progresses.

FUNDING: Water Fund - \$90,000

Funding Available:

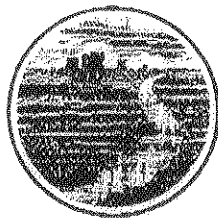

Finance Director


for Richard C. Prima, Jr.
Public Works Director

RCP/pmf

Attachment

cc: Randy Hays, City Attorney
Wally Sandelin, City Engineer
Fran Forkas, Water/Wastewater Superintendent
Saracino Kirby Snow



Saracino-Kirby-Snow

A Schlumberger Company

980 Ninth Street
Suite 1480
Sacramento, CA
95814
916.329.9199
fax 916.329.9191
skswater.com

January 28, 2002

Mr. Richard Prima, Director of Public Works
City of Lodi
221 West Pine Street
P.O. Box 3006
Lodi, CA 95241-1910

Subject: Proposal to Provide Engineering Services

Dear Mr. Prima:

Saracino-Kirby-Snow is pleased to present this proposal to assist the City of Lodi with a technical assessment of surface water supply options. From discussions with City staff, it is our understanding that there are four principal tasks, plus an optional modeling effort:

1. Assess options for use of surface water supply
 2. Assess feasibility of using reclaimed water from White Slough
 3. Identify mitigations for increased water demand from new developments
 4. Assist City with Mokelumne River Water and Power Authority involvement
 5. Groundwater flow modeling (optional task)
-
1. Assess options for use of surface water supply. Potential sources of surface water supply for the City include transfer of water from an existing Mokelumne River water right holder, or participation in a project to develop a new water right on the River or from the Delta. Key to evaluation of these potential sources is determining how the water could be put to use. A surface water supply could either be kept isolated from the existing

Water Planning & Management

distribution system, or the existing system could be upgraded to accept a dual surface water/groundwater supply. Options that SKS will evaluate that would not involve direct distribution to customers include groundwater injection or pond recharge, direct supply for irrigation use, regional groundwater banking projects (e.g. with NSJWCD), and holding stormwater in detention basins. The feasibility of developing surface water treatment and delivery through the existing distribution system will also be evaluated. This Task will be initiated with a kick-off meeting with key City staff to facilitate data transfer and to brainstorm the range of possible surface water use options. For each option, SKS will develop an assessment of potential volume of use, a description of operations, a conceptual sizing of diversion and distribution facilities, location mapping of these facilities, and a feasibility-level cost estimate based on unit cost factors. We will also identify key policy and regulatory considerations, such as treatment upgrades and compliance with the proposed Groundwater Rule. The results of this assessment will be summarized in a stand-alone technical memorandum and executive summary.

2. Assess feasibility of using reclaimed water from White Slough. For this task, SKS will review and update the reclaimed water assumptions in the City's 2001 Urban Water Management Plan. An appraisal of suitable landscape irrigation sites will be performed using existing City water sales records and GIS coverages to estimate the volume of reclaimed water that could be reasonably put to use. An overview assessment will be performed of non-irrigation reclaimed water uses, such as a commercial dual plumbing or dedicated fire fighting systems. For each option, SKS will develop an assessment of potential volume of use, a description of operations, a conceptual sizing of diversion and distribution facilities, location mapping of these facilities, and a feasibility-level cost estimate based on unit cost factors. This assessment will be documented in a technical memorandum and executive summary.
3. Identify mitigations for increased water demand from new developments. New developments add additional demand on the groundwater resource and require construction of additional facilities to accommodate this demand. For this task, SKS will review the practices of at least three northern California municipal utilities that impose development mitigation requirements and compile a list of potential requirements that the City could reasonably require to offset these impacts. Potential measures may include funding conservation programs, contribution to an infrastructure construction fund, dual plumbing, construction or funding of new water production and transmission facilities, landscaping and irrigation requirements, additions to the building code, meter requirements, or funding of a

meter installation program. A discussion of these potential measures and their water supply consequences will be presented in a technical memorandum and executive summary.

4. Assist City with Mokelumne River Water and Power Authority involvement. The Mokelumne River Water and Power Authority is performing preliminary engineering analysis for development of facilities to make use of long-standing water right and power generation applications on the Mokelumne River. SKS staff will monitor and summarize the activities of the Authority and provide recommendations on City involvement on an as-needed basis. For this task, we have assumed attendance at five meetings and one presentation to the Lodi City Council, with written briefs submitted to City staff.
5. Groundwater Flow Modeling (optional task). If desired by the City, a groundwater flow model will be developed, calibrated, and used to project effects of City groundwater operations under future no-action and active recharge scenarios. First, a conceptual model of the aquifers underlying Lodi will be developed from available well logs and geologic cross-sections. From discussions with City staff and consultants, it is our understanding that limited processed data is available, and well logs on file will require interpretation and evaluation. Up to four cross-sections will be created to characterize the surface aquifer and upper semi-confined aquifer system in the Lodi area. Data from previous pumping tests of City wells and nearby agricultural wells will be relied upon for estimates of aquifer transmissivity and storativity. Data from previous coarse-grid regional model studies will be used to establish regional (north County) water budgets. The resulting conceptual model will be used to construct a three-dimensional static computer model of the aquifer system, calibrated to match steady-state conditions. The computer model to be used will be USGS ModFlow or equivalent. It is our understanding from our discussions with City staff that electronic records of water level data are available from 1992 to the present. This task includes extending the existing record to a total of 30 years using available paper records from City files. The steady-state model will be converted into a dynamic simulation model and calibrated to historical operations over a representative period. A model development memorandum with executive summary will be prepared and reviewed with City staff. Finally, the calibrated model will be used to project future conditions in the aquifer system under up to four operational scenarios. SKS will work with City staff to determine representative City demands on the groundwater system under future conditions with and without a supplemental surface water supply, and to determine operational scenarios to test. Such scenarios could include direct surface water recharge using ponds or injection, and decreased reliance on groundwater pumping by serving potable or non-potable uses with a surface water supply. It is our understanding from discussions with City water quality

consultants that the areal extent of existing contaminant plumes in the downtown area are well understood, but that the depth of these plumes are not well defined. SKS will evaluate existing water quality data and develop contaminant transport capability into the groundwater flow model as appropriate. If quality data are not adequate to characterize known contaminants, at a minimum SKS will use particle tracking techniques in the groundwater flow model to estimate potential movement of contaminants through groundwater recharge activities. The results of the scenario evaluation will be presented in a technical memorandum with executive summary.

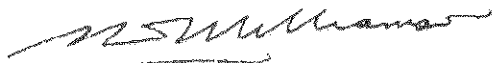
SKS will perform the above analyses for a total cost not to exceed \$276,000, including \$200,000 in optional tasks, pursuant to our normal costs for time and materials (attached), as detailed below:

Task 1:	\$38,100
Task 2:	\$23,500
Task 3:	\$6,700
Task 4:	\$7,700
Task 5:	\$200,000 (optional)

Tasks 1 through 3 will be completed within four months of notice to proceed. It is recommended to fund Task 4 at an initial \$7,700 level. Actual charges will be on a time and materials basis pursuant to specific City authorization. If authorized, Task 5 will be completed within 12 months of notice to proceed, and can be performed concurrent with Tasks 1 through 4.

We appreciate the opportunity to provide the City with continuing consulting services to help meet your water supply needs. Please contact me if you have any questions.

Sincerely,



Mark S. Williamson
Program Manager

cc: F. Wally Sandelin, Lodi City Engineer
Anthony Saracino, SKS
Glenn McPherson, SKS

City of Lodi**Proposal for Consulting Services
Researching Feasibility of Acquiring Water from
Woodbridge Irrigation District****Fee Schedule for Professional Services
Saracino-Kirby-Snow****Professional Services:**

Position	Hourly Rates
Principal	\$180
Operations Manager	\$170
Program Manager	\$160
Senior Engineer	\$145
Senior Resource Planner	\$145
Senior Software Developer	\$145
Project Engineer	\$120
GIS Specialist	\$115
Resource Program Analyst	\$105
Staff Engineer	\$90
Assistant Engineer	\$75
Executive Assistant	\$70
Clerical / Word Processing Support	\$50

Direct Project Expenses:

Automobile Mileage	\$0.45 per mile
Equipment Rental	Cost
In-house Reproduction (Black & White)	\$0.15 / page
Subcontract services	Cost + 10%

1/29/2003

City of Lodi -- Engineering Services

		Duration (months)	Number of Meetings	Predecessors	Start	Finish	Principal	Program Manager	Project Engineer/ Modeler	Staff Engineer	GIS Specialist	Clerical Support	Travel & Misc. Expense	Total	Rounded Total	
							Rate	180	160	120	90	115	70			
1	Assess (6) options for use of surface water supply				1-Jul	1-Jul									\$38,100	
	Kick-off/Brainstorming meeting		1		1-Jul	1-Jul	6	6		6		2	\$180	\$2,900		
	Estimate volume and operation		1		1-Jul	1-Jul	2	15		36		4	\$120	\$6,400		
	Conceptual sizing				1-Jul	1-Jul	2	12		48		2	\$0	\$6,740		
	Mapping						0	3		12	30	2	\$300	\$5,450		
	Conceptual cost estimates						1	6		24			\$0	\$3,300		
	Key policy and regulatory		1				4	9	12	12			\$120	\$4,800		
	Tech Memo/Exec Sum				1-Jul	1-Jul	4	10	8	40	12	4	\$0	\$8,540		
					1-Jul	1-Jul										
2	Assess feasibility of using reclaimed water from White Slough														\$23,500	
	Review/update reclaimed water assumptions		1				2	12		24			\$120	\$4,560		
	Non-irrigation use assessment						1	4		18	20		\$0	\$4,740		
	Estimate volume and operation		1				1	10		18			\$120	\$3,520		
	Conceptual sizing						1	6		24			\$0	\$3,300		
	Mapping						0	1		6	12		\$0	\$2,080		
	Conceptual cost estimates						0	3		12			\$0	\$1,560		
	Tech Memo/Exec Sum						2	5		20	4	4	\$0	\$3,700		
3	Identify mitigations for increased water demand from new developments.				1-Jul	1-Jul							\$0	\$0	\$6,700	
	Review practices of (3) NorCal utilities		1				2	12		24			\$60	\$4,500		
	Tech Memo/Exec Sum						2	3		12		4	\$0	\$2,200		
4	Assist City with Mokelumne River Water and Power Authority Involvement		6		1-Jul	1-Jul	2	38		8		2	\$360	\$7,660	\$7,700	
5	Groundwater transport modeling				1-Jul	1-Jul									\$200,000	
	Data collection and assessment		1		1-Jul	1-Jul	1	11		40			\$60	\$5,600		
	Develop (4) cross-sections				1-Jul	1-Jul	1	10	40	12	8		\$0	\$8,580		
	Develop conceptual model/water budgets		1		1-Jul	1-Jul	4	31	60	101			\$60	\$22,030		
	Construct steady-state groundwater model				1-Jul	1-Jul	3	27	80	80			\$0	\$21,660		
	Digitize (12) water level records (20 years)		1		1-Jul	1-Jul	1	8		24		12	\$60	\$4,520		
	Construct 3-D groundwater flow model						4	33	120	80			\$0	\$27,600		
	Calibration						5	40	160	80			\$0	\$33,700		
	Model development memorandum		1				1	9	24	8		4	\$60	\$5,580		
	Test (4) operations scenarios						4	32	96	96			\$0	\$26,000		
	Assess contaminant movement		1				6	44	160	80			\$60	\$34,580		
	Tech Memo/Exec Sum		1				4	14	40	20		8	\$60	\$10,180		
					1-Jul	1-Jul							\$0	\$0		
													\$0	\$0		
	Total:	0.0	18		1-Jul	1-Jul	Total Hours:	66	414	800	965	86	48	\$1,740	\$275,960	\$276,000

Tasks 1-4 Load (4mo): 4.6% 22.4% 2.9% 49.6% 11.3% 3.5%

Task 5 Load (12 mo): 1.6% 12.5% 37.5% 29.9% 0.4% 1.2%

RESOLUTION NO. 2003-20

A RESOLUTION OF THE LODI CITY COUNCIL AUTHORIZING
THE CITY MANAGER TO EXECUTE PROFESSIONAL SERVICES
AGREEMENT WITH SARACINO KIRBY SNOW FOR WATER
SUPPLY PLANNING WORK, AND FURTHER APPROPRIATE
FUNDS FOR THE PROJECT

NOW, THEREFORE, BE IT RESOLVED, that the Lodi City Council does hereby authorize the City Manager to execute a professional services agreement with Saracino Kirby Snow for water supply planning work; and

BE IT FURTHER RESOLVED, that funds in the amount of \$90,000.00 be appropriated from the Water Fund for this project.

Dated: February 5, 2003

I hereby certify that Resolution No. 2003-20 was passed and adopted by the City Council of the City of Lodi in a regular meeting held February 5, 2003, by the following vote:

AYES: COUNCIL MEMBERS – Beckman, Hansen, Howard, Land, and
Mayor Hitchcock

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – None

ABSTAIN: COUNCIL MEMBERS – None


SUSAN J. BLACKSTON
City Clerk

CITY COUNCIL

SUSAN HITCHCOCK, Mayor
EMILY HOWARD
Mayor Pro Tempore
JOHN BECKMAN
LARRY D. HANSEN
KEITH LAND

CITY OF LODI

PUBLIC WORKS DEPARTMENT

CITY HALL, 221 WEST PINE STREET
P.O. BOX 3006
LODI, CALIFORNIA 95241-1910
(209) 333-6706
FAX (209) 333-6710
EMAIL pwdept@lodi.gov
<http://www.lodi.gov>

H. DIXON FLYNN
City Manager
SUSAN J. BLACKSTON
City Clerk
RANDALL A. HAYS
City Attorney
RICHARD C. PRIMA, JR.
Public Works Director

January 30, 2003

Mr. Mark Williamson
Saracino Kirby Snow
555 Capital Mall, Ste. 1550
Sacramento, CA 95814

SUBJECT: Adopt Resolution Authorizing City Manager to Execute Professional Services Agreement with Saracino Kirby Snow for Water Supply Planning Work, and Appropriate \$90,000

Enclosed is a copy of background information on an item on the City Council agenda of Wednesday, February 5, 2003. The meeting will be held at 7 p.m. in the City Council Chamber, Carnegie Forum, 305 West Pine Street.

This item is on the regular calendar for Council discussion. You are welcome to attend.

If you wish to write to the City Council, please address your letter to City Council, City of Lodi, P. O. Box 3006, Lodi, California, 95241-1910. Be sure to allow time for the mail. Or, you may hand-deliver the letter to City Hall, 221 West Pine Street.

If you wish to address the Council at the Council Meeting, be sure to fill out a speaker's card (available at the Carnegie Forum immediately prior to the start of the meeting) and give it to the City Clerk. If you have any questions about communicating with the Council, please contact Susan Blackston, City Clerk, at (209) 333-6702.

If you have any questions about the item itself, please call me at (209) 333-6759.



for:

Richard C. Prima, Jr.
Public Works Director

RCP/pmf

Enclosure

cc: City Clerk